

## **International finance for forest and agribusiness**

Jean-Marc Roda

Promoting both competitiveness and tropical forest sustainability among corporate players is a major challenge. Southeast Asia has become a laboratory of globalization processes, where the development and success of agribusiness transnationals raises questions about their commitment to environmental concerns. An abundance of literature discusses what determines the behavior and success of Asian corporations, with a particular emphasis on cultural factors. Our hypothesis is that financial factors, such as ownership structure, may also have a fundamental role. We analyzed the audited hundreds of major Asian agribusiness companies. Using network analysis, we deciphered how they relate to each other and determine the behavior of the transnationals to which they belong. We compared various metrics. We found that ownership structures reflect differences in flexibility, control and transaction costs, but not in ethnicities. The ownership structure of the shareholdings explains major differences in competitiveness and flexibility. Capital and its control, and flexibility explain 97% of the environmental behavior. For the first time, the inner mechanisms of corporate governance are unraveled in agricultural and forest sustainability. New implications such as the convergence of environmental sustainability with family business sustainability emerged.

Competitiveness, oil palm; forest; transnationals; investment strategy; emerging markets; competitiveness; network analysis; network metrics; ethnic business; ownership structure



# International finance for forest and agribusiness

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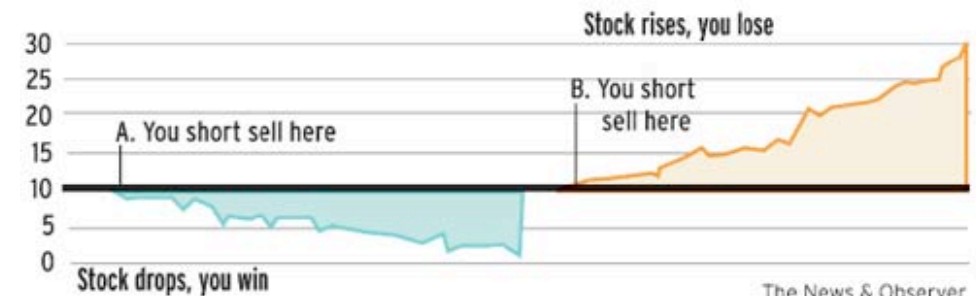
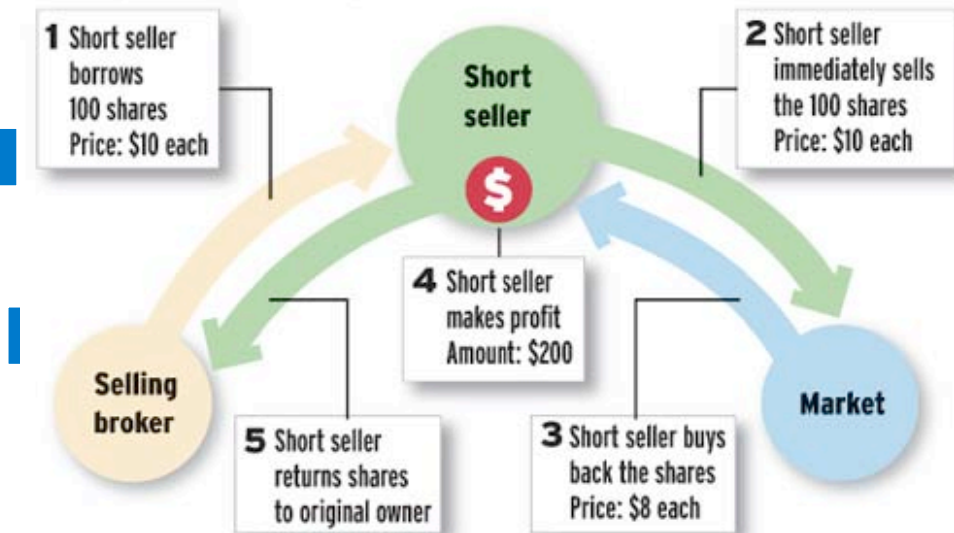
# Tale of international finance : Olam

Muddy Watters is not finance analyst, it is a "short-seller"

## SHORT SELLING

Short sellers borrow shares of stock from a broker to sell on the financial market. After an agreed-upon number of days, the short seller will have to buy the stock back and return it to the broker, along with a fee. The short seller's hope is to sell the stock high and buy it back low to make a profit.

An example of short selling



# Tale of international finance : Olam



# In the Olam tale, there is a problem: how classical analysis tools create a distorted vision

- This presentation is presents a novel approach for the analysis of structural fundamentals of corporations

- There is a powerful relationship between the ownership structure and the competitiveness of business groups
- **Olam, Wilmar and Sinar Mas**, now compete/cooperate with **ABCD** traders (**Archer Daniels Midland, Bunge, Cargill, Louis Dreyfus**). Others such as **Sime Darby, Ta Anco, WTK, Samling**, etc., are less known but are on the same playing field (tropical agriculture and tropical forestry)



# The objectives are to understand how:

- Corporate structures, policies and economic processes explain the strategies of South East Asia transnationals operating in Asia, Africa, America (and Europe)
- To measure objectively the competitiveness fundamentals of a forest or agribusiness transnational

# The current research

- Using network analysis, we analysed the ownership structures of a few South-East Asian transnationals.  
**=> 931 companies, forming 4 transnationals, operating all over the world**
- We determined the topology of their network of subsidiaries, and we compared it to their environmental strategies (using eco-certificates as a proxy)
- Our hypothesis is that the **topology of their ownership structure might be as important as market factors.**



# Topologies of ownership structure

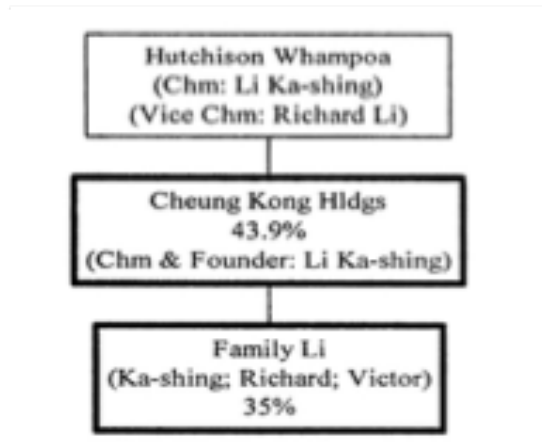


Exhibit 1. Family type

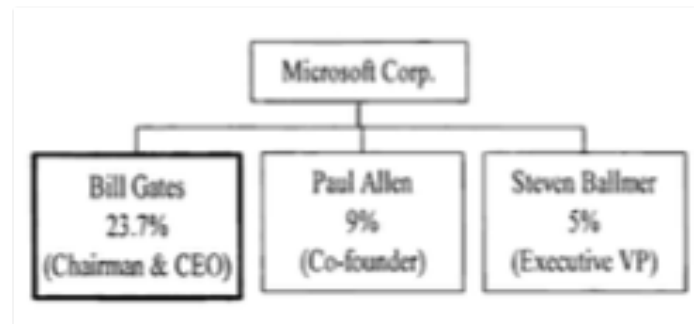


Exhibit 1. Sectoral type

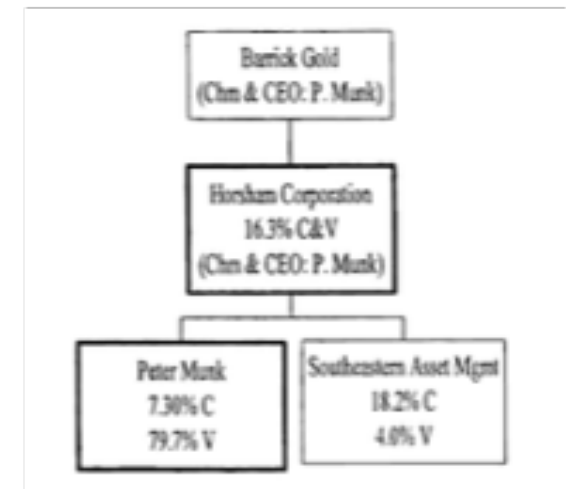


Exhibit 2. Management fund type

Source: LAPORTA et al. Corporate ownership around the world, 1999.

# The “obscure” nature of “asian” transnationals

Literature on “oversea chinese” business and ethnic business

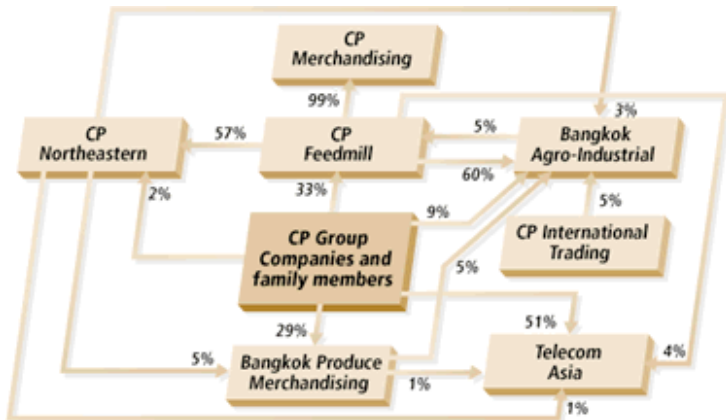


EXHIBIT I  
AN INVESTMENT "MAP" OF THE CHAROEN POKPHAND GROUP

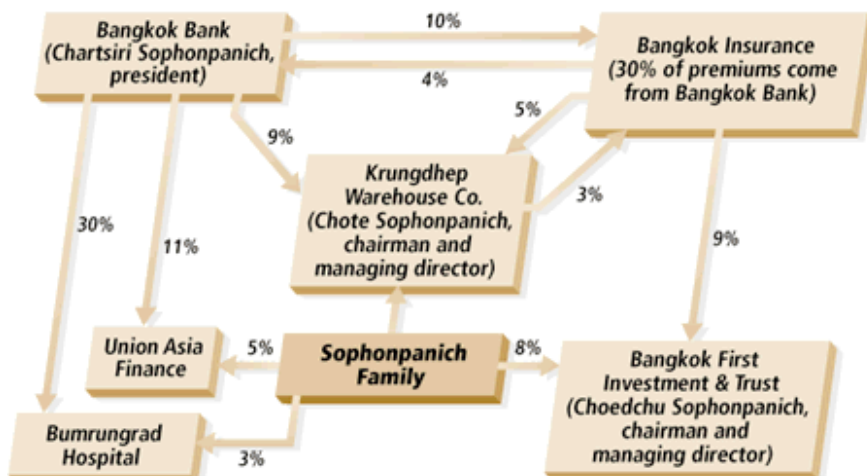
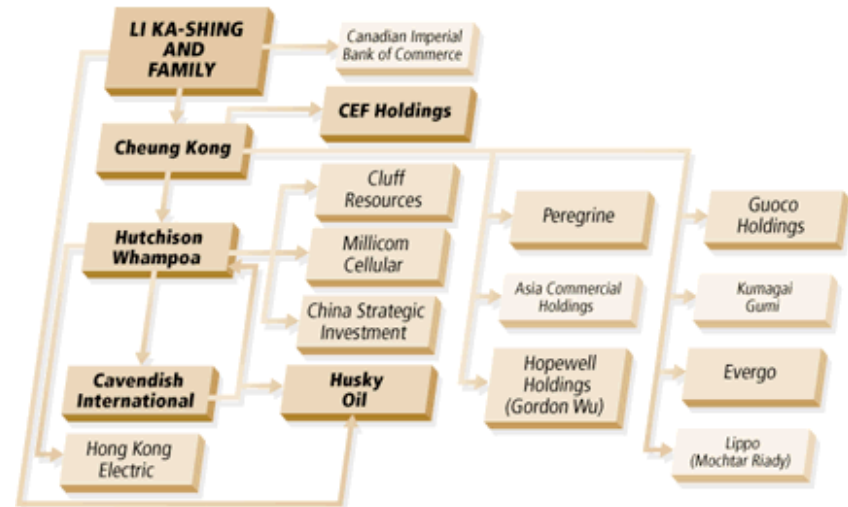


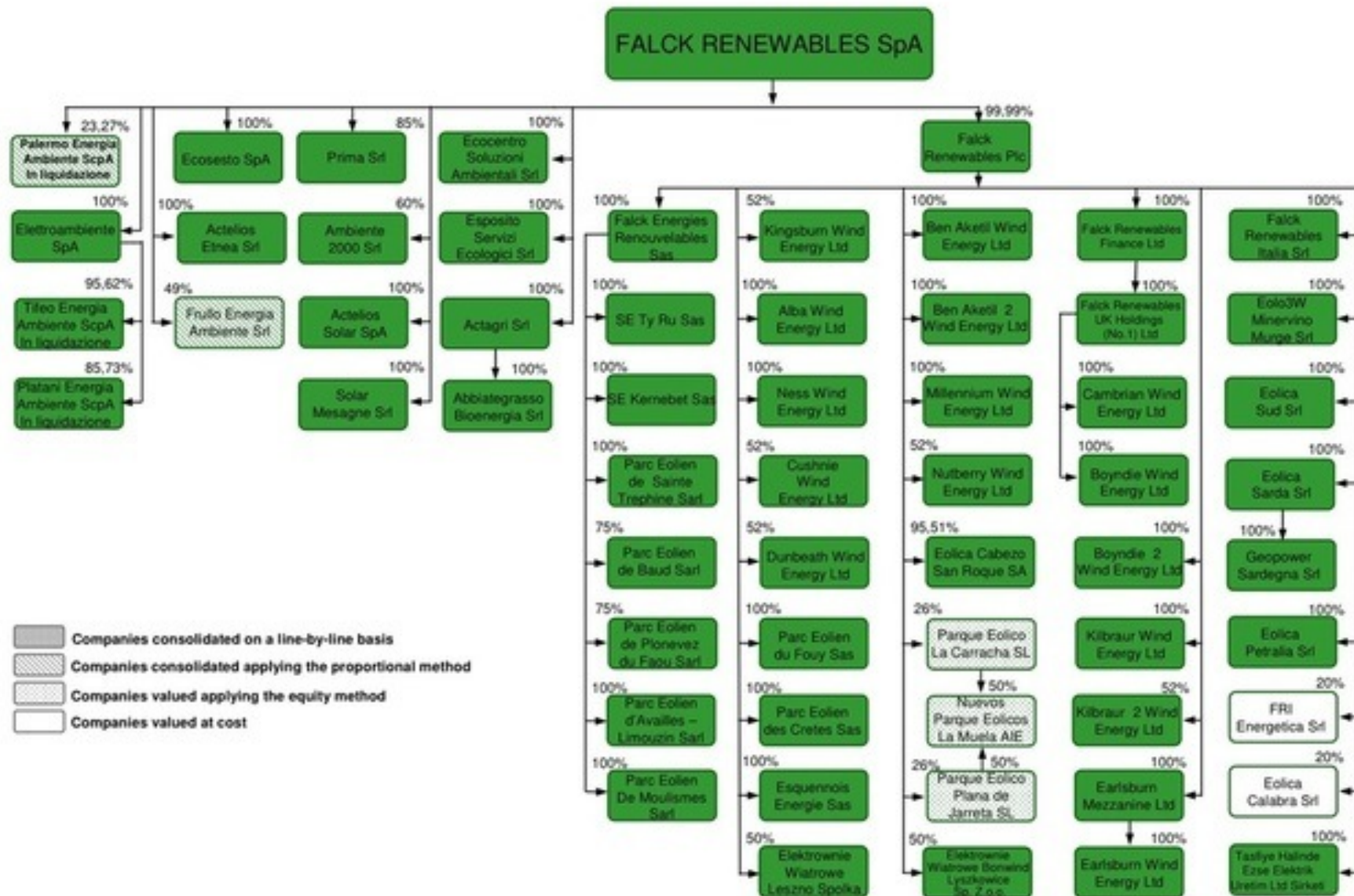
EXHIBIT IV  
BANGKOK BANK GROUP (SOPHONPANICH FAMILY)

EXHIBIT II  
LI KA-SHING'S HOLDINGS



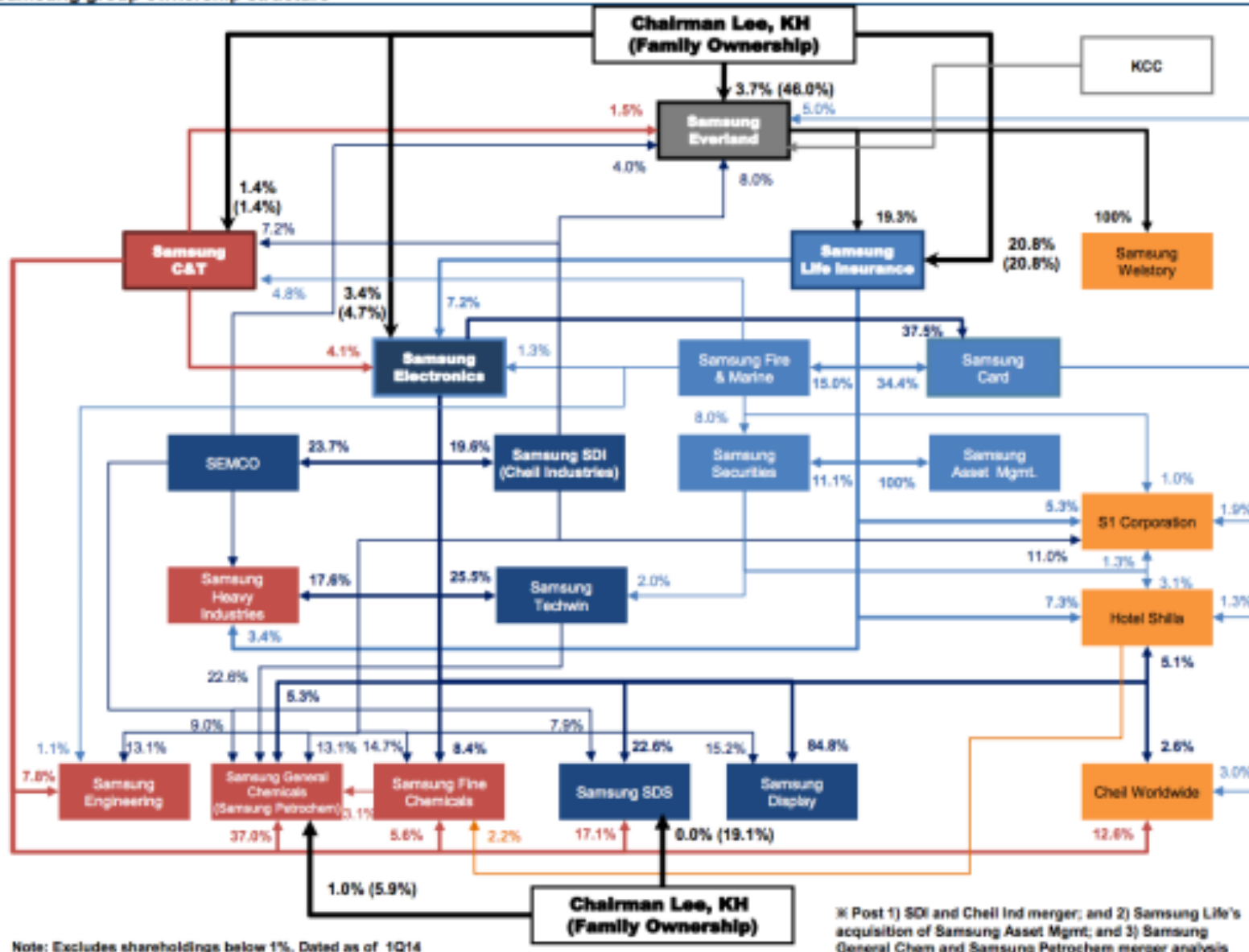
# “Western type” capitalist structure

## STRUCTURE OF FALCK RENEWABLES GROUP



# “Asian type” - a Chaebol

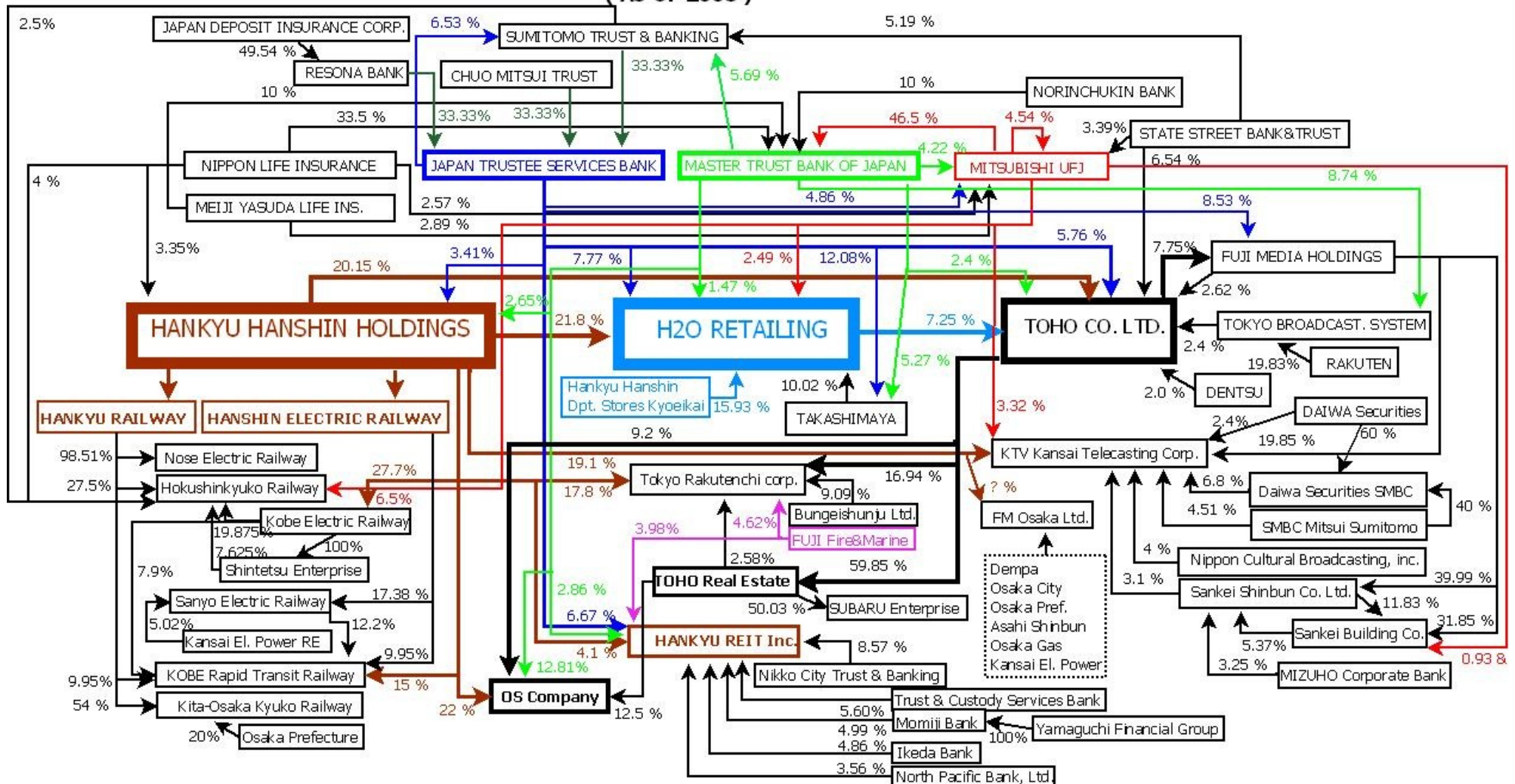
Figure 8: Samsung group ownership structure





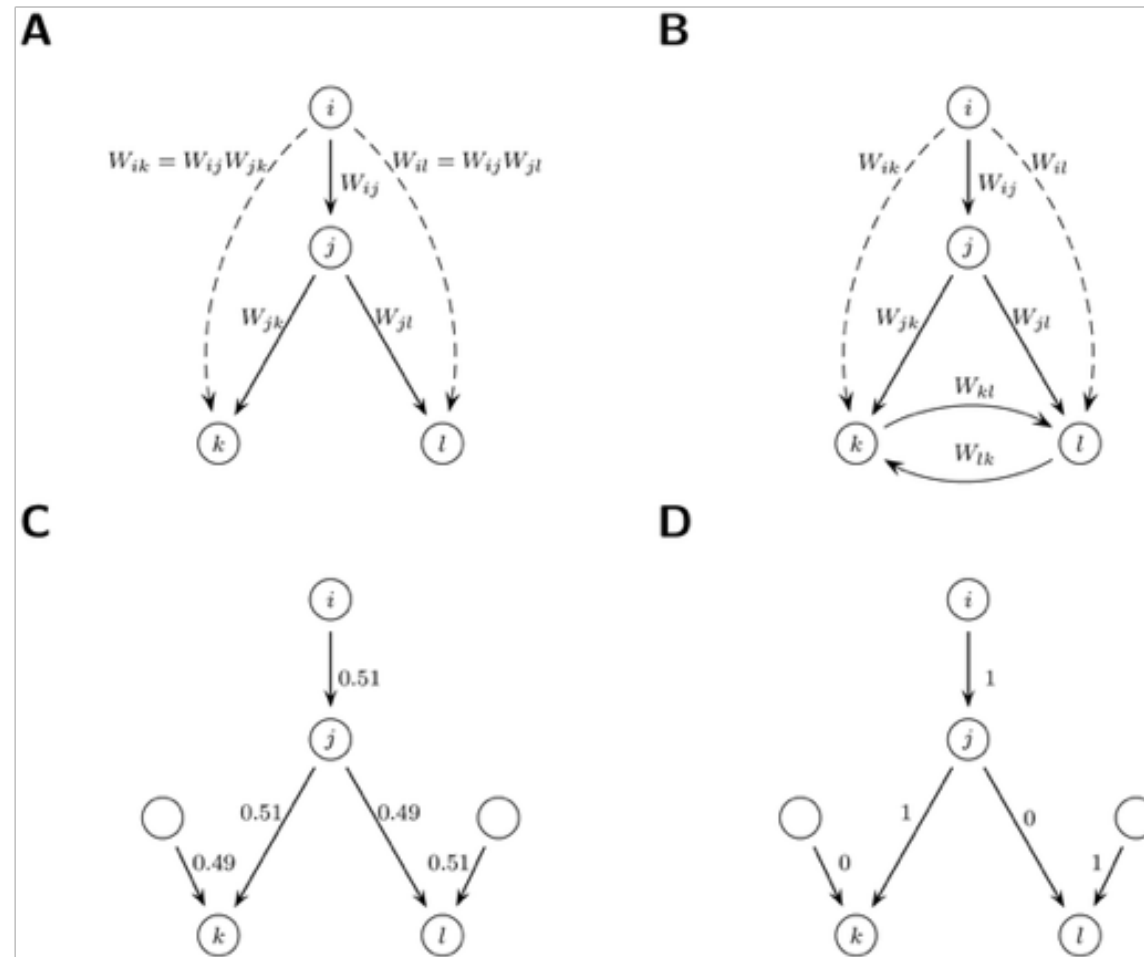
# “Asian type” - a Keiretsu

**OVERVIEW : OWNERSHIP STRUCTURES WITHIN THE HANKYU-HANSHIN-TOHO GROUP  
( AS OF 2008 )**



# Network analysis, an new powerful tool

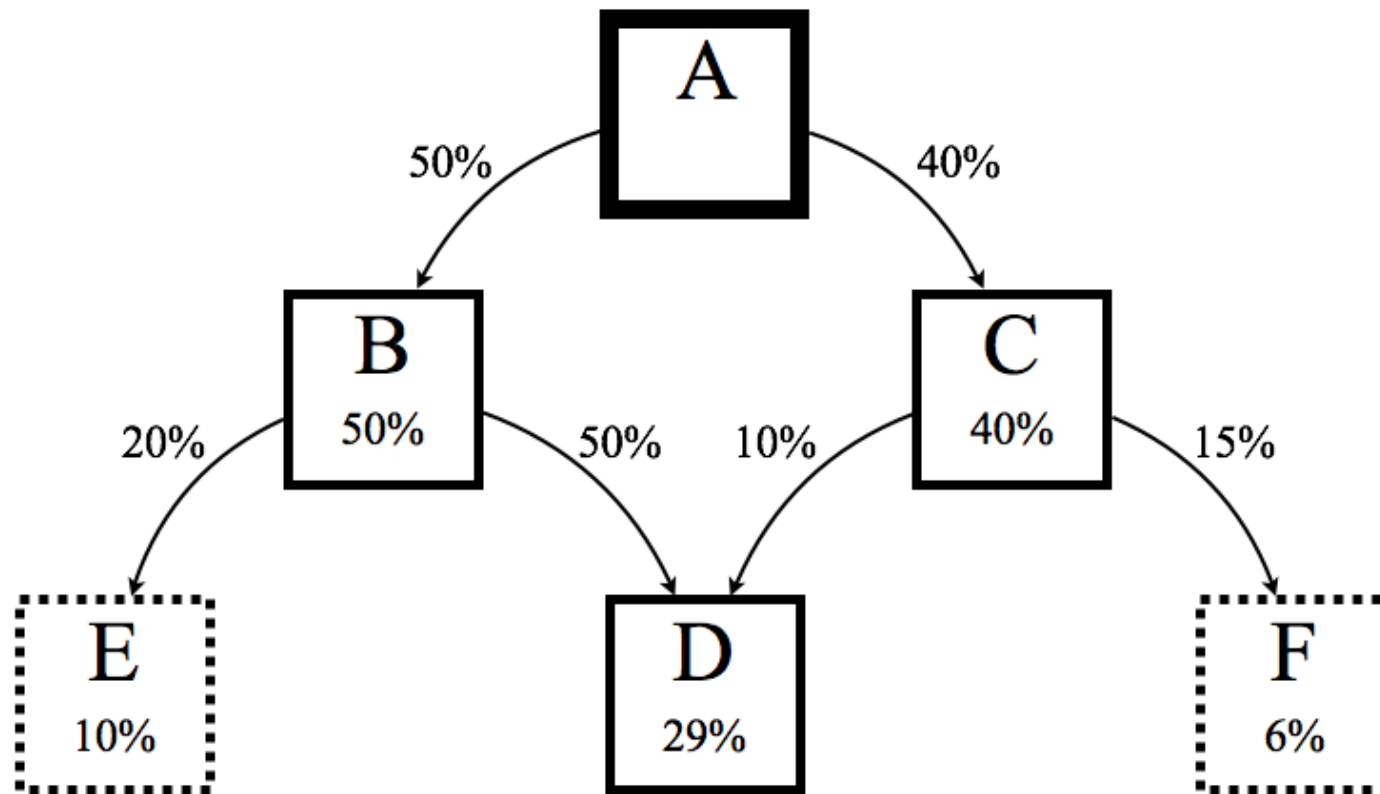
Figure 1. Ownership and Control.



Vitali S, Glattfelder JB, Battiston S (2011) The Network of Global Corporate Control. PLoS ONE 6(10): e25995. doi:10.1371/journal.pone.0025995

<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0025995>

# Network analysis, Ownership vs Control



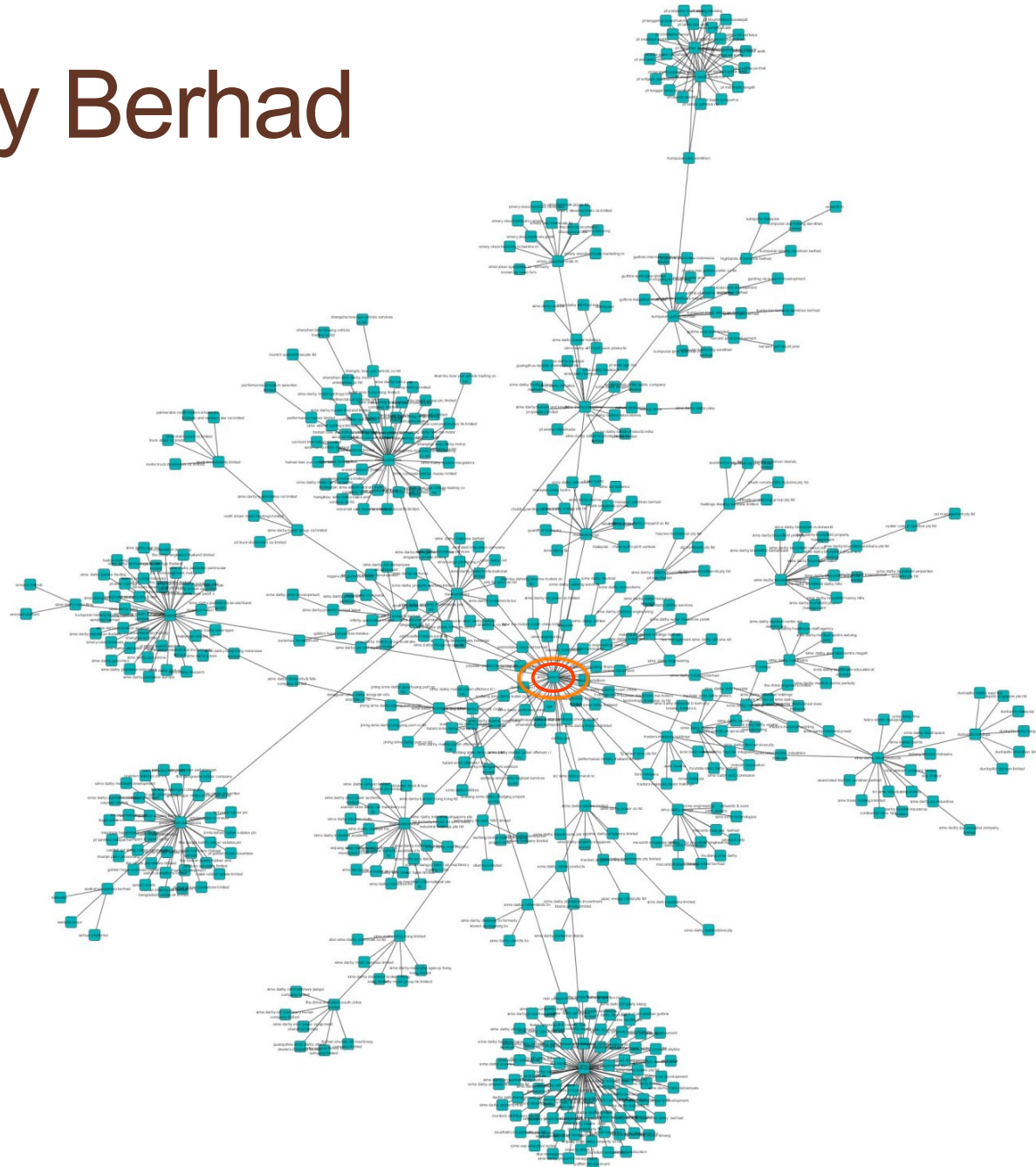
If Control threshold is 30%, does A control D, or not ?

# Where empirics and quantification allow us to dive



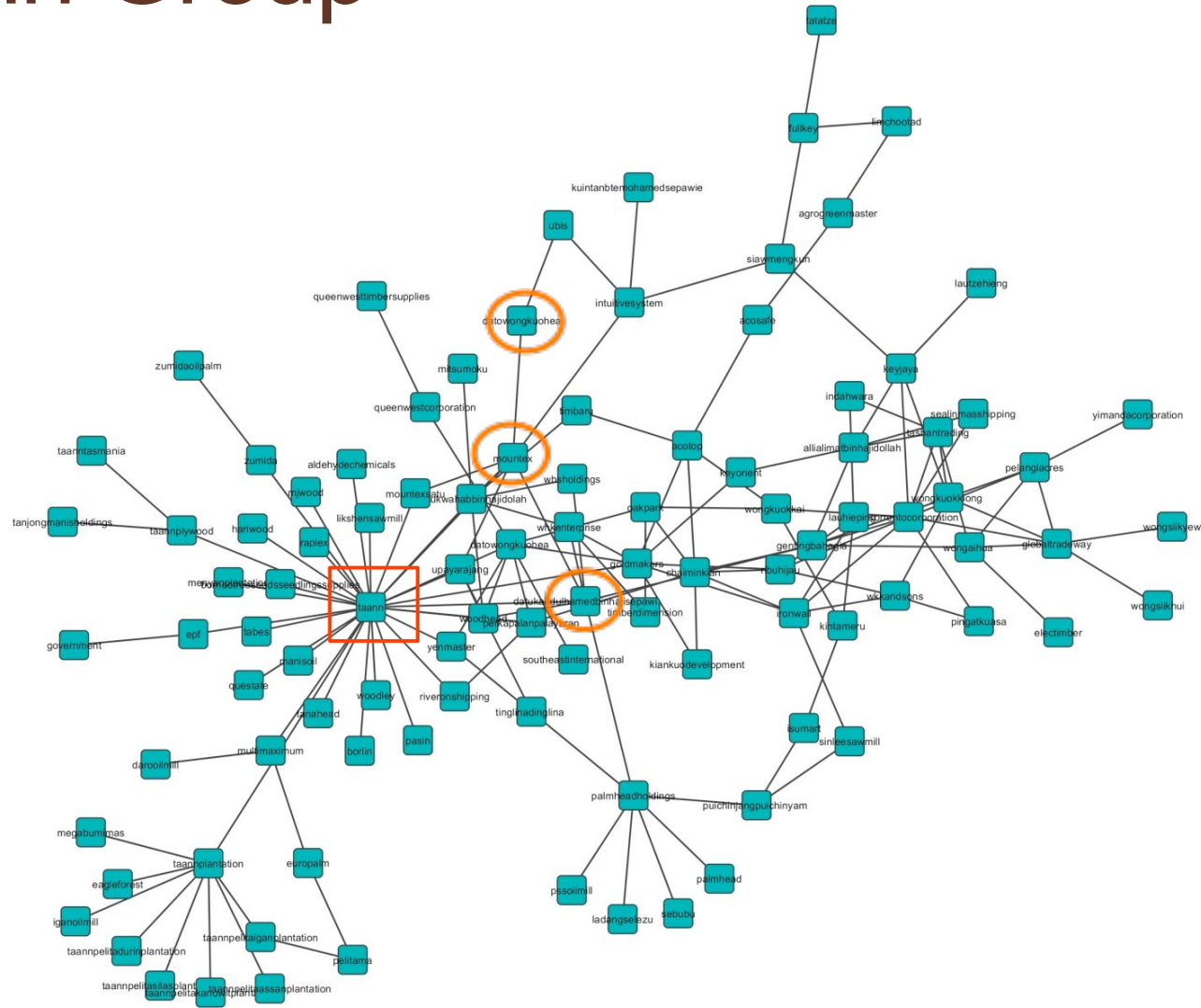
Group	Share capital (USD)	Family	Government	Market
WTK	66 million	48%	2%	50%
Ta Ann	94 million	50%	9%	40%
Olam	1,680 million	22%	14%	64%
Sime Darby	1,820 million	0%	68%	32%

# Sime Darby Berhad





# Ta Ann Group



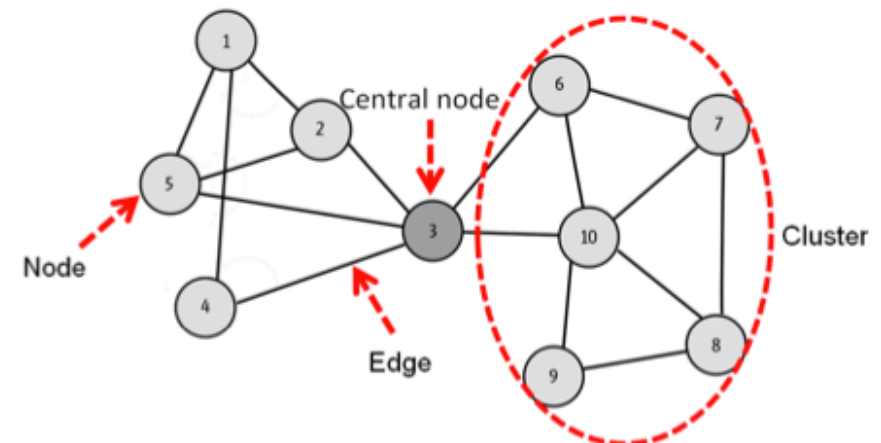


# Olam International Limited



## How to describe the ownership structure ?

- **Ownership structure diameter**
- **Average ownership tier**
- **Number of companies**
- **Number of shortest ownership lines**
- **Co-management index**
- **Hierarchy index**
- **Average cross-shareholding coefficient**
- **Shareholding closeness**
- **Shareholding betweenness**
- **Shareholding stress**
- ...

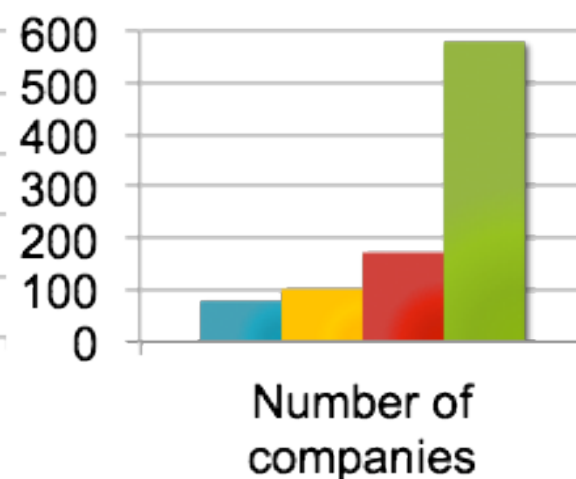
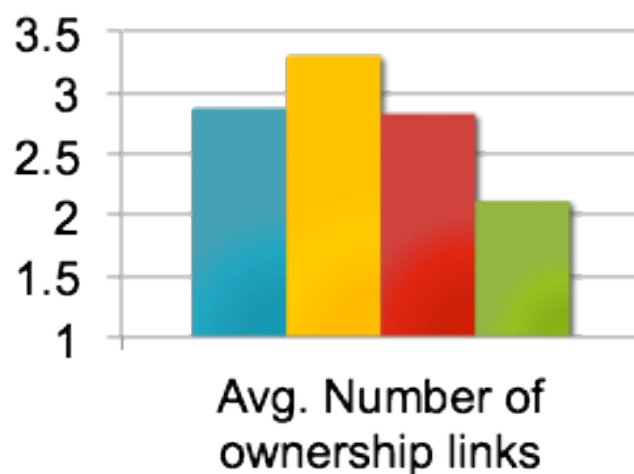
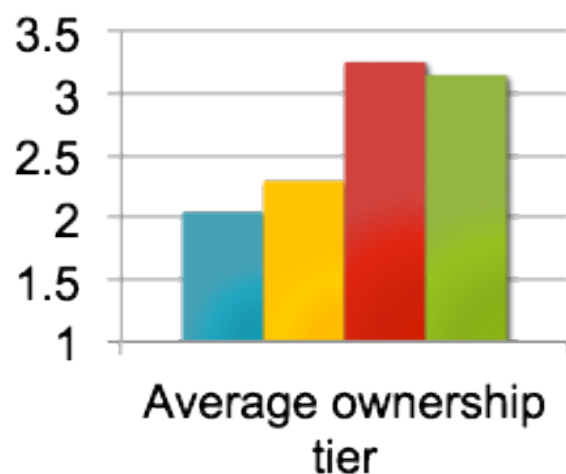
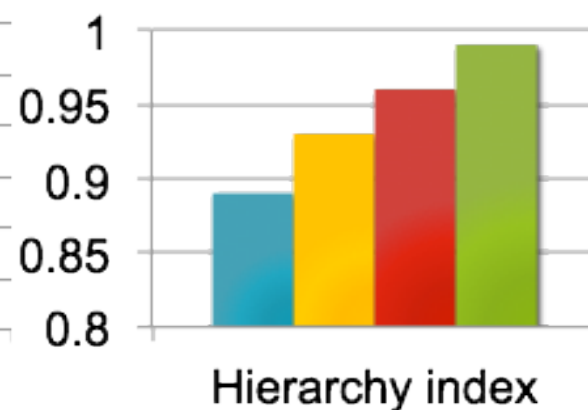
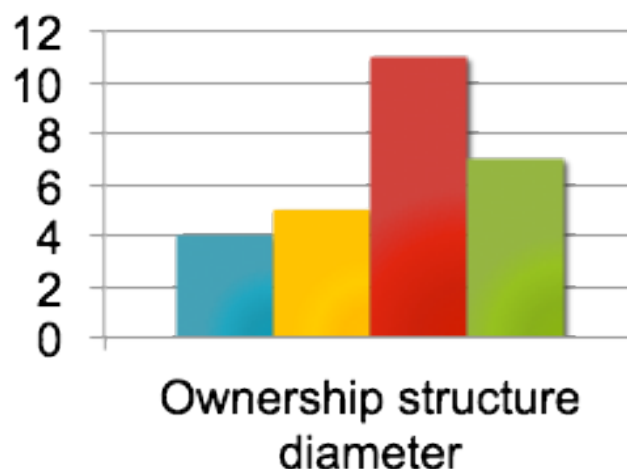
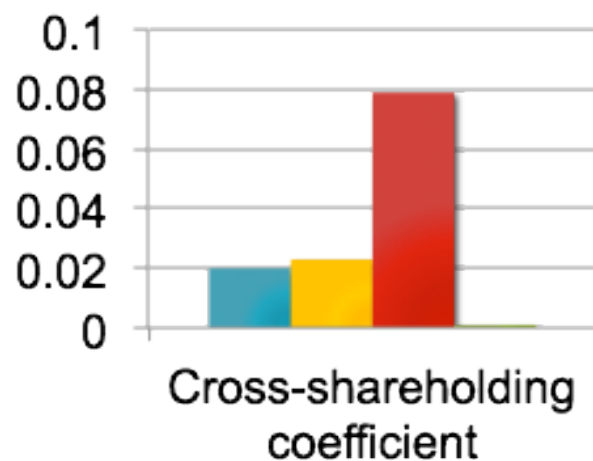


■ WTK

■ TaAnn

■ Olam

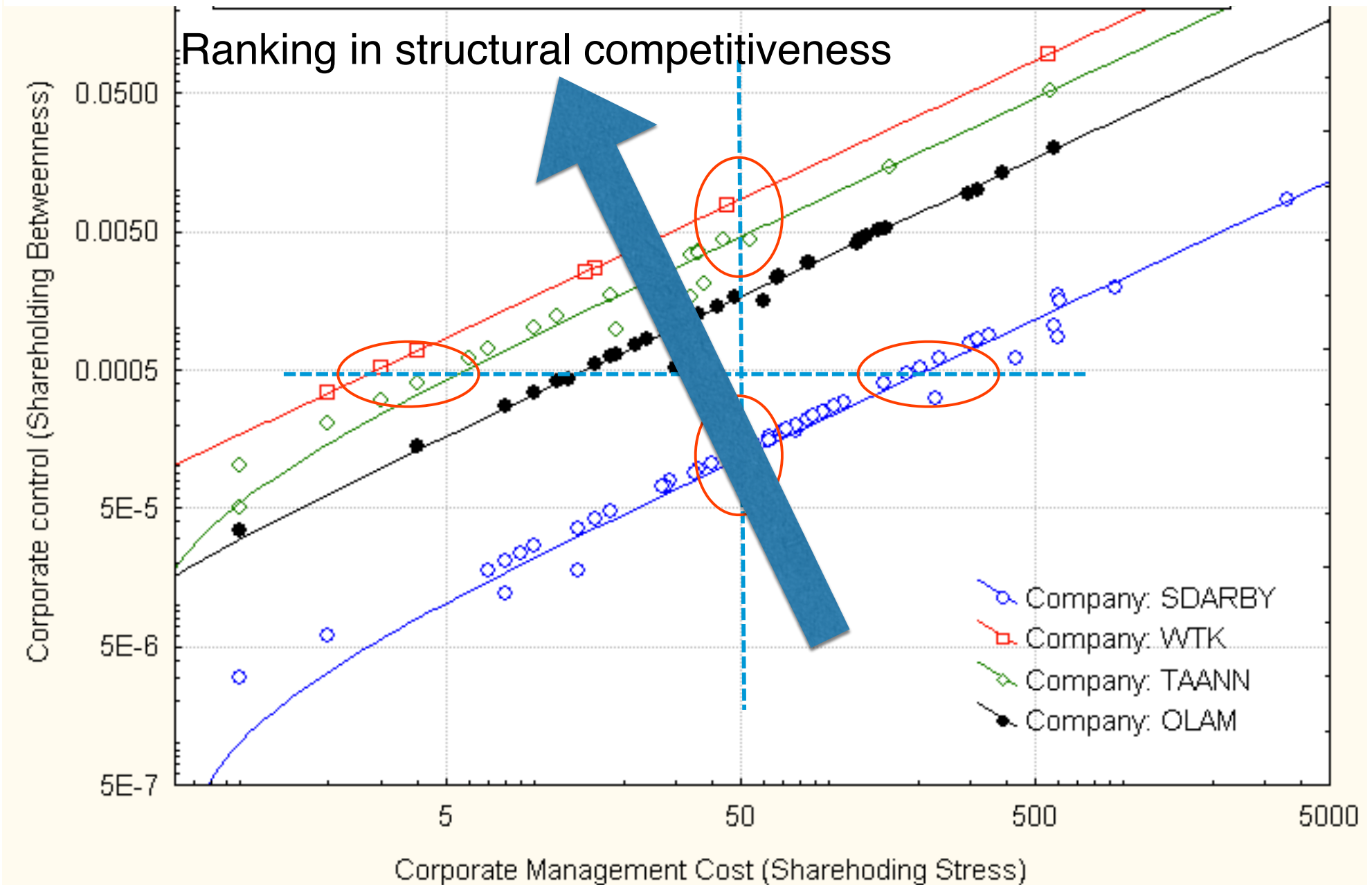
■ Sime Darby



How the insights into the specifics of the network help uncover organisational properties which are otherwise invisible



# Uncovering structural competitiveness



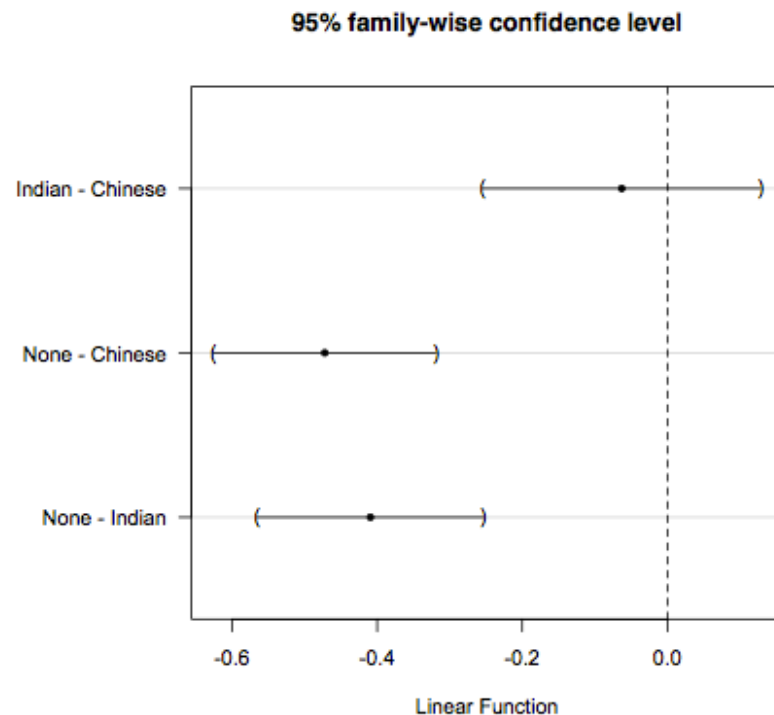
# Definitions about investment strategies

- Sectoral investment (or vertical and horizontal investments) => high returns but high risks
- Portfolio investment (or global investment) => weighting returns and risks
- Related investment (or interrelated investments) => weighting synergies, control and flexibility = embracing risks

# What are related investments ?

	Land	Upstream	Supply chain	Midstream Downstream
Edible commodities	★	★	★	★
Confectionnery beverages		★	★	★
Food & packaged food		★	★	★
Industrial raw material	★	★	★	★
Logistics		★	★	★
Construction Real estate	★	★	★	★
Media Communication		★	★	★
Financial services		★	★	★

- Ownership Structures Reflect Clear Differences in Flexibility, Control and Transaction Costs, But Not in Ethnicities



### Ownership type

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Ownership	1	42.6	42.58	72.44	<2e-16 ***
Residuals	928	545.5	0.59		

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mean            sd data:n data:NA

Family	0.6478320	1.0173607	351	0
Government	0.2064063	0.5630665	579	1

### Investment strategy

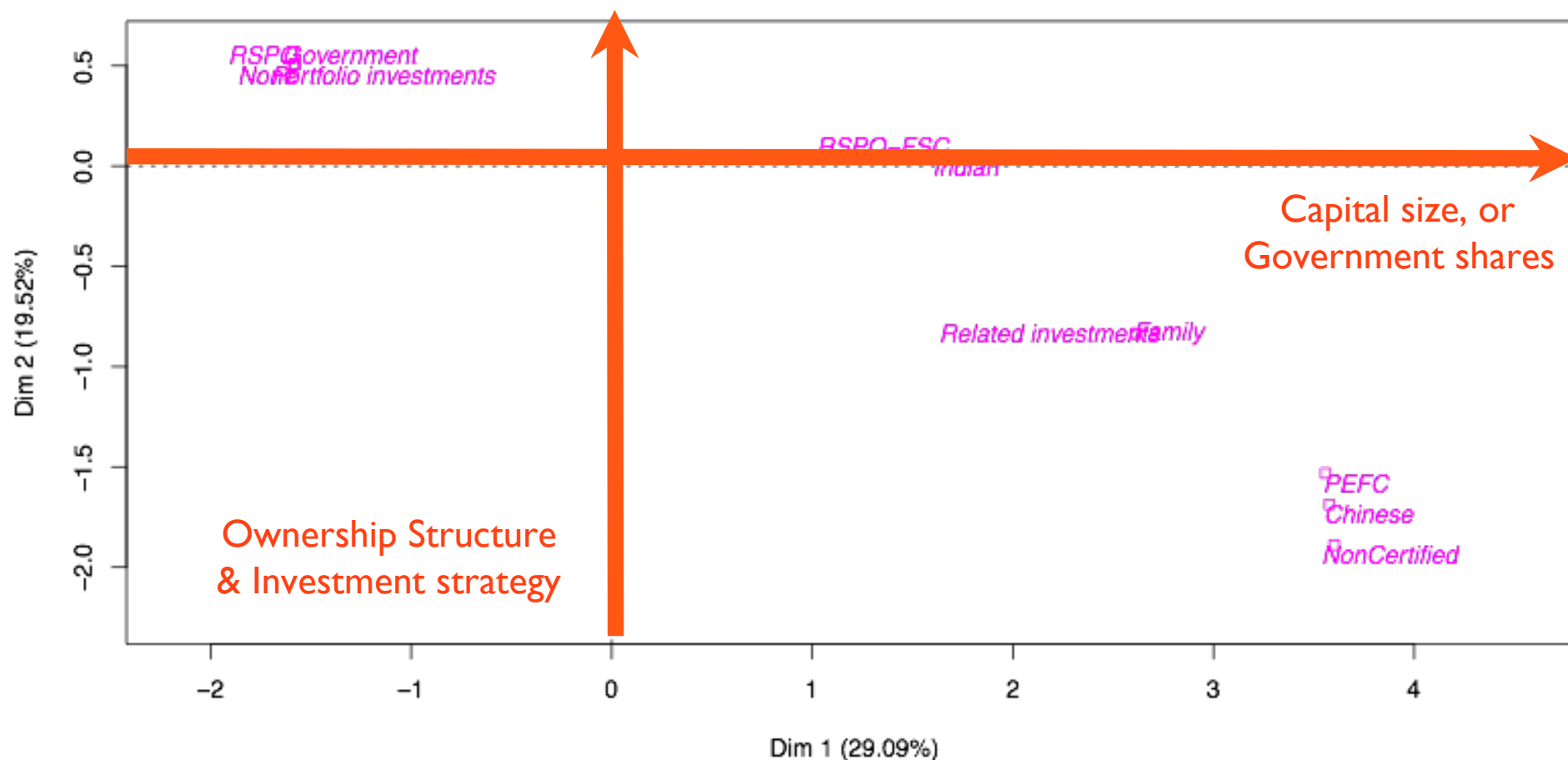
	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Strategy	1	42.6	42.58	72.44	<2e-16 ***
Residuals	928	545.5	0.59		

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mean            sd data:n data:NA

Portfolio investments	0.2064063	0.5630665	579	1
Related investments	0.6478320	1.0173607	351	0

Individuals factor map (PCA)



**Capital and its control, ownership structure and flexibility explain 97% of the certification strategy**

	Dim.1	Dim.2	Dim.1+ Dim.2
% of eigenvalues of environmental commitment	78.83%	18.11%	96.94%

# Conclusion

- Ownership structures definitely determine corporate strategies.
- Ownership structures reflect clear differences in flexibility, control and transaction costs, but not in ethnicities. Transnationals choose between various relative transaction or organization costs.
- Capital and its control, ownership structure and flexibility explain 97% of the environmental certification strategy of the transnationals studied.
- More transnationals should be studied to draw conclusions on the role of governments, investment strategies in shaping or influencing environmental corporate governance.
- Implications: structural competitiveness index, measure of fundamentals => this allows assessments with less influence from the stock exchange variations.